

OCT. 20, 2011 No.358

The BARN

SEPTEMBER

MEETING

The Beaumont Amateur Radio Club will hold this month's meeting, at 7:30 PM Monday, Oct. 24, 2011 at Wesley Methodist Church, 3810 N. Major Drive (at the end of Folsom Drive) in Beaumont. This month's meeting will feature a discussion by John Harrington, W5EME about Baluns. Also we can expect an update on the progress of a second balloon launch attempt.

CONTENTS

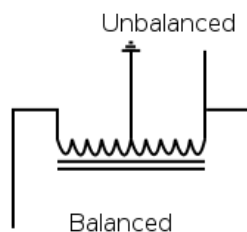
Editorially Speaking	2
Odds and Ends	3
From the Internet	4
Calendar of Events	5
Local Repeater Freq.	2
Club Directory	6

The BARN is a copyrighted publication of the Beaumont Amateur Radio Club as a service to all hams of the Golden Triangle Area

MEETING A WEEK EARLY THIS MONTH

Because of the Halloween Holiday, the BARCs October meeting will be held a week early on Oct. 24. Have no fear, we will be at the regular meeting location and same time as usual. Hope to see you all there.

John Harrington, W5EME, will again this month attempt to demystify one of Ham Radios many useful gadgets. The Balun will be his topic this month.



Meeting News from: <http://en.wikipedia.org/wiki/Balun>

A balun (is a type of electrical transformer that can convert electrical signals that are balanced about ground (differential) to signals that are unbalanced (single-ended), and the reverse. They are also often used to connect lines of differing impedance. The origin of the word balun is **bal**(ance) + **un**(balance).

Baluns can take many forms and their presence is not always obvious. They always use electromagnetic coupling for their operation.

Autotransformer type

In an autotransformer, two coils on a ferrite rod can be used as a balun by winding the individual strands of enameled wire comprising the coil very tightly together. This winding can take one of two forms: either the two windings must be wound such that the two form a single layer where each turn is touching each of the adjacent turns of the other winding; or the two wires are twisted together before being wound into the coil.

The two windings are joined to become a single coil. The end of one of the windings on one side of the coil is connected to the end of the other winding on the other side of the coil. This point then becomes the ground for the unbalanced circuit. One of the remaining ends is connected to the ungrounded side of the unbalanced circuit, and one side of the balanced circuit. Finally, the other side of the balanced circuit is connected to the remaining end.

Classical transformer type

Isolated transformers have a real impedance at a resonance frequency where self-inductance and self-capacitance for each individual winding are equal at a given frequency.

Transmission-line transformer type

Baluns can be considered as simple forms of transmission line transformers.

A more complex (and subtle) type results when the transformer type (magnetic coupling) is combined with the transmission line type (electro-magnetic coupling). This is where transmission lines are used as windings, resulting in devices capable of very wideband operation. "Transmission line transformers" commonly use small ferrite cores in toroidal or "binocular" shapes. Something as simple as 10 turns of coaxial cable coiled up on a diameter about the size of a dinner plate makes an extremely effective choke balun for frequencies from about 10 MHz to beyond 30 MHz. The magnetic material may be "air", but it is a transmission line transformer.

The Guanella transmission line transformer is often combined with a balun to act as an impedance matching transformer. Putting balancing aside a 1:4 transformer of this type consists of a 75 Ohm transmission line divided in parallel into two 150 Ohm cables, which are then combined in series for 300 Ohm. It is implemented as a specific wiring around the ferrite core of the balun.

Delay line type

A large class of baluns uses connected transmission lines of specific lengths, with no obvious "transformer" part. These are usually built for (narrow) frequency ranges where the lengths involved are some multiple of a quarter wavelength of the intended frequency in the transmission line medium. A common application is in making a coaxial connection to a balanced antenna, and designs include many types involving coaxial loops and variously connected "stubs".

One easy way to make a balun is a one-half wavelength ($\lambda/2$) length of coaxial cable. The inner core of the cable is linked at each end to one of the balanced connections for a feeder or dipole. One of these terminals should be connected to the inner core of the coaxial feeder. All three braids should be connected together. This then forms a 4:1 balun which works at only one frequency.

Another narrow band design is to use a $\lambda/4$ length of metal pipe. The coaxial cable is placed inside the pipe; at one end the braid is wired to the pipe while at the other end no connection is made to the pipe. The balanced end of this balun is at the end where the pipe is wired to the braid. The $\lambda/4$ conductor acts as a transformer converting the infinite impedance at the unconnected end into a zero impedance at the end connected to the braid. Hence any current entering the balun through the connection, which goes to the braid at the end with the connection to the pipe, will flow into the pipe. This balun design is not good for low frequencies because of the long length of pipe that will be needed. An easy way to make such a balun is to paint the outside of the coax with conductive paint, then to connect this paint to the braid.

From the Internet: Got Updates? (<http://www.arrl.org/news/surfin-got-updates>)

By Stan Horzepa, WA1LOU
Contributing Editor

This week, your old -- but young at heart -- Surfin' conductor provides updates to past episodes the column.

Parts Proliferating at RadioShack?

Regarding my mention that RadioShack was back in the parts business, providing bits and pieces for hobbyists and do-it-yourselfers, Rick Herndon, K5FNI, wrote: "I'm not sure they've really gone back to selling 'tons o' parts.' I surely couldn't see any difference in the store I visited last week in Calallen, Texas. The components are still packed away in that little case with the sliding drawers, as they have been for the last few years. They have not returned to wall presentation or even multiple drawer units that I could see. Have you visited a store since you wrote your blog post and checked this out?"

It seems to be the same around here. Has anyone noticed any real improvements in their local RadioShack parts business?

My Steve Jobs Story

I need to correct one thing in the column I wrote about my experience with Steve Jobs: The Mac that had display issues was a 17-inch Powerbook G4 1.67 GHz "Aluminum" model, not a MacBook Pro.

I have owned so many Macs over the years that I can't remember exactly what I owned when. But a reader jogged my memory when he asked for specifics concerning the problem, so I carefully re-researched the issue, and now the truth can be told.

It seems that a batch of 17-inch Powerbooks manufactured in Shanghai in April 2005 had defective screens that began breaking down 12-18 months after their date of manufacture. The defect was the appearance of one-pixel-wide vertical lines on the screen.

One line showed up on my screen in the fall of 2006 and over the months, it multiplied to more than 100 lines. The lines did not pose a problem using text-based applications, but they did make graphic-based applications very hard on my eyes, so much so that I stopped using my Mac for those applications.

Home for Old QSLs

I have mentioned Bob Green, W8JYZ, and his website, QSL Cards from the Past, (<http://oldqslcards.com/>) a few times in the past, most recently two years ago. (<http://www.arrl.org/news/surfin-telling-your-stories>)

Bob wrote recently, "Just a quick note to say my old QSL cards collection total has just passed the 35,000 mark and is growing every day. I received an e-mail from Ted Walker, KJ7V. He found my website and asked if he could send a number of old QSL collections he was holding from SK club members as a donation to my collection. I was happy to tell him to please send them along at his convenience. Someone a while back called my website the 'old QSL cards clearing house.' It seems like it is getting to that point. It is still my goal to continue to save as many old QSL cards as possible and try and get them back into the hands of the people they mean the most to [via the website]."

In that regard, if you have a collection of QSL cards from a deceased ham, don't discard them. Instead, send them to Bob and he will give them a good home.

Until next time, keep on surfin'!

Editor's note: Stan Horzepa, WA1LOU, likes old QSL cards. To contact Stan, send e-mail or add comments to the WA1LOU blog.

Local Happenings

rlh.hudgins@gmail.com, Christian Holidays, US Holidays Nov 2011 (Central Time)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31 7:30am - Beaumont Club	1 7:30am - BTARC Meeting	2 8am - JCARC Net	3 8am - BTARC Net @ 146.25 7am - BARC Net	4	5
8	7	8 7:30am - Jcars meeting @	9 8am - JCARC Net	10 8am - BTARC Net @ 146.25 7am - BARC Net	11	12
13	14	15 8:30am - Dinner Social @ Isten	16 8am - JCARC Net	17 8am - BTARC Net @ 146.25 7am - BARC Net 7:30am - ARES meeting @	18	19 8am - BTARC Breakfast @ Mema
20	21	22	23 8am - JCARC Net	24 8am - BTARC Net @ 146.25 7am - BARC Net	25	26
27	28 7:30am - Beaumont Club	29	30 8am - JCARC Net	1 8am - BTARC Net @ 146.25 7am - BARC Net	2	3

Local Repeater Frequencies and Access Codes...

52.525 6 Meter FM National Calling Frequency
 145.010 BPT (W5SSV) Packet
 145.050 Packet
 145.070 Packet
 145.210 S.W.L.A.R.C. (W5BII, pl 103.5)*
 145.230 B.T.A.R.C. (N5BTC, pl 103.5)*
 145.470 J.C.A.R.C. pl 103.5*
 145.350 Sulphur A.R.C. (KC5PNH, pl 103.5)*
 146.450 Mid County Simplex
 146.520 National Simplex
 146.700 B.A.R.C. (W5RIN, pl 107.2)*
 146.730 S.W.L.A.R.C. (W5BII, pl 173.8)#
 146.760 B.A.R.C. (SW Lynx Link) pl 107.2
 146.860 Port Arthur (WD5GJP) pl 103.5

146.980 H.A.M.S. (Devers, N5FJX, pl 103.5)*#
 147.060 DuPont (AA5P, pl 103.5)
 147.180 Orange A.R.C. (W5ND, pl 103.5)*
 147.300 Mobil Oil (W5XOM) (pl 103.5)*
 147.420 Simplex
 224.920 Devers (KA5QDG) Down
 442.575 Devers (KA5QDG, pl 103.5) Down
 444.500 Beaumont-(WB5ITT, pl 100.0) Down
 444.700 B.A.R.C. (W5RIN, (Salt Grass) pl 107.2) on low power
 444.900 Mobil Oil (W5XOM, pl 103.5) Down

* Denotes transmitted PL tone. # Denotes echo link.

BARN YARD

From: Doug Thomas, [N5BST \(n5bst@arrl.net\)](mailto:n5bst@arrl.net)
Secretary-Treasurer, [W5SSV](http://www.w5ssv.com)

I am adding a new page to our website. I have had a couple of members asking me to list some items that they have for sale.

So,, just "click" on the sign at www.w5ssv.com and it will take you to the listing.

If any of you have items that you might want to list, just drop me an e-mail and let me know.

Mosley CL3 Three element Triband (20m/15m/10m) beam antenna. Good condition....	\$125.00
Pyramid 12V 20Amp Power Supply. Excellent condition.....	\$ 65.00
Radio Shack Pro 2038 Mobile/Base Scanner Good condition	\$ 40.00
Icom IC-T2H 2 Meter with AA Battery Case	\$ 75.00
Icom IC-V82 Meter with Desk charger	\$ 85.00
Heil Handi Mic with Icom Modular Plug like new	\$ 65.00

Contact Earl, K5UJC at 833-4449

Lufkin Hamfest 2011

Co-Sponsored by:

Deep East Texas Amateur Radio Club & Nacogdoches Amateur Radio Club

Lufkin Hamfest 2011 is ARRL sanctioned. If you are not an ARRL member or would like to renew your ARRL membership you may do so while attending Lufkin Hamfest 2011. ARRL members will be available to assist you and each new or renewed membership will qualify for one of several free ARRL publications.

When: Saturday, October 22, 2011. Doors open at 8 a.m.

Where: Lufkin First Church of the Nazarene - 1604 S. Medford Drive - Lufkin, TX 75901.

Driving Directions: From all highways coming into Lufkin, get on loop 287. On south loop 287 traveling west, take Ford Chapel Road exit. Stay on access road and cross Ford Chapel Road. Lufkin First Church of the Nazarene is 0.2 miles on the right.

On south loop 287 traveling east, take Ford Chapel Road exit. Stay on access road. At the intersection with Ford Chapel Road, make a 180 degree turn under loop 287. Lufkin First Church of the Nazarene is 0.2 miles on the right. More info at: <http://www.lufkinhamfest.com/>

Here is another installment of:

LB's Tips and Techniques.

If you happen to see a gasoline tanker filling the tanks at your local gas station, come back another day or go to a different station. As the station's underground tanks are being filled, the turbulence can stir up sediment. Sediment in your gas can clog fuel filters and fuel injectors, causing poor performance and possibly necessitating repairs.

The BARN

A Publication of the
BEAUMONT AMATEUR RADIO CLUB
 P.O. Box 7073 Beaumont, TX 77726



Club Directory...

BEAUMONT AMATEUR RADIO CLUB OFFICERS

PRESIDENT	WALT LOMBARD	W5CPH	892-5663
VICE-PRES.	MIKE FAUCHEAUX	N5KBW	727-1071
SECRETARY	JOANN LOMBARD	KD5RRW	892-5663
TREASURER	JOANN LOMBARD	KD5RRW	892-5663
EDITOR	EARL OSTER	K5UJC	833-4449

DIRECTORS

CRAIG HARDER	KE5PIQ	347-2265
TOOTIE HEINTSCHEL	KC5HVT	962-1435
VIVID PEEVEY	KF5CEF	
JOHN HARRINGTON	W5EME	665-6311

MEMBERSHIP INFORMATION

<input type="checkbox"/> FULL MEMBERSHIP.....	\$20.00	
<input type="checkbox"/> ADDITIONAL FAMILY MEMBER....	5.00	(ANNUAL RATES)
<input type="checkbox"/> BARN SUBSCRIPTION ONLY.....	7.50	

NAME	CALL	LICENSE CLASS	ARRL (Y/N)	PHONE
ADDRESS	CITY/STATE	ZIP CODE	E-MAIL	

NEW MEMBERS: DUES ARE PRORATED MONTHLY THROUGH DECEMBER. SUBSCRIPTIONS TO THE BARN ARE GOOD FOR ONE YEAR (12 ISSUES) STARTING WITH THE FIRST ISSUE AFTER RECEIPT OF THE APPROPRIATE AMOUNT. MARK THE CORRESPONDING BOX ABOVE AND MAIL WITH YOUR REMITTANCE TO "TREASURER" AT THE ADDRESS ABOVE.